6AC10

Compactron Triple Triode

The 6AC10 is a compactron containing three high-mu triodes. It is designed for use primarily as a color-difference amplifier in color television receivers.

GENERAL

ELECTRICAL

Cathode - Coated Unipotential

Heater Characteristics and Ratings

	Series Circuit*	Parallel Circuit‡	
Heater Voltage, AC or DC	6.3	6.3±0.6§	Volts
Heater Current	0.6±0.04¶	0.6Δ	Amperes
Heater Warm-up Time, Average#	11	---	Seconds

Direct Interelectrode Capacitances**

	Section 1	Section 2	Section 3	
Grid to Plate: (g to p)	1.3	1.2	1.2	pf
Input: g to (h + k)	2.4	2.6	2.6	pf
Output: p to (h + k)	0.22	0.30	0.44	pf

MECHANICAL

Operating Position - Any
Envelope - T-9, Glass
Base - E12-70, Button 12-Pin
Outline Drawing - EIA 9-59

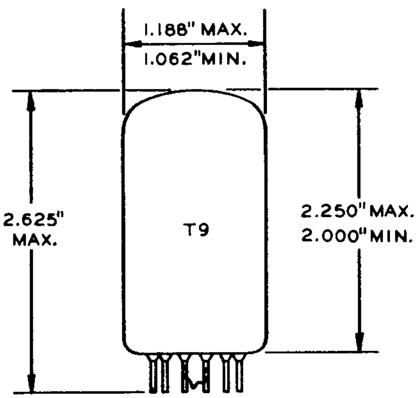
Maximum Diameter	1.188	Inches
Minimum Diameter	1.062	Inches
Maximum Over-all Length	2.625	Inches
Maximum Seated Height	2.250	Inches
Minimum Seated Height	2.000	Inches

MAXIMUM RATINGS

DESIGN-MAXIMUM VALUES, EACH SECTION

Plate Voltage	330	Volts
Plate Dissipation	2.0	Watts
Heater-Cathode Voltage		
Heater Positive with Respect to Cathode		
DC Component	100	Volts
Total DC and Peak	200	Volts
Heater Negative with Respect to Cathode		
Total DC and Peak	200	Volts
Grid Circuit Resistance	0.5	Megohms

PHYSICAL DIMENSIONS

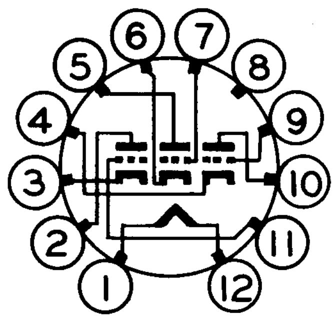


EIA 9-59

TERMINAL CONNECTIONS

Pin 1 - Heater
Pin 2 - Plate (Section 3)
Pin 3 - Cathode (Section 3)
Pin 4 - Cathode (Section 1)
Pin 5 - Plate (Section 2)
Pin 6 - Cathode (Section 2)
Pin 7 - Grid (Section 2)
Pin 8 - No Connection
Pin 9 - Grid (Section 1)
Pin 10 - Plate (Section 1)
Pin 11 - Grid (Section 3)
Pin 12 - Heater

BASING DIAGRAM



EIA 12FE

MAXIMUM RATINGS (Cont'd)

Design-Maximum ratings are limiting values of operating and environmental conditions applicable to a bogey electron tube of a specified type as defined by its published data and should not be exceeded under the worst probable conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube, making allowance for the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration.

The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in the characteristics of all other electron devices in the equipment.

CHARACTERISTICS AND TYPICAL OPERATION

AVERAGE CHARACTERISTICS, EACH SECTION

Plate Voltage	200	Volts
Cathode-Bias Resistor	150	Ohms
Amplification Factor	62	
Plate Resistance, approximate	10700	Ohms
Transconductance	5800	Micromhos
Plate Current	9.0	Milliamperes
Grid Voltage, approximate Ib = 100 Microamperes	-5	Volts

NOTES

* Operated with the heater in series with the heaters of other tubes having the same bogey heater current.

‡ Operated with the heater in parallel with the heaters of other tubes having the same bogey heater voltage.

§ For parallel heater operation, the equipment designer should design the equipment so that heater voltage is centered at the specified bogey value, with heater supply variations restricted to maintain heater voltage within the specified tolerance.

¶ For series heater operation, the equipment designer should design the equipment so that heater current is centered at the specified bogey value, with heater supply variations restricted to maintain heater current within the specified tolerance.

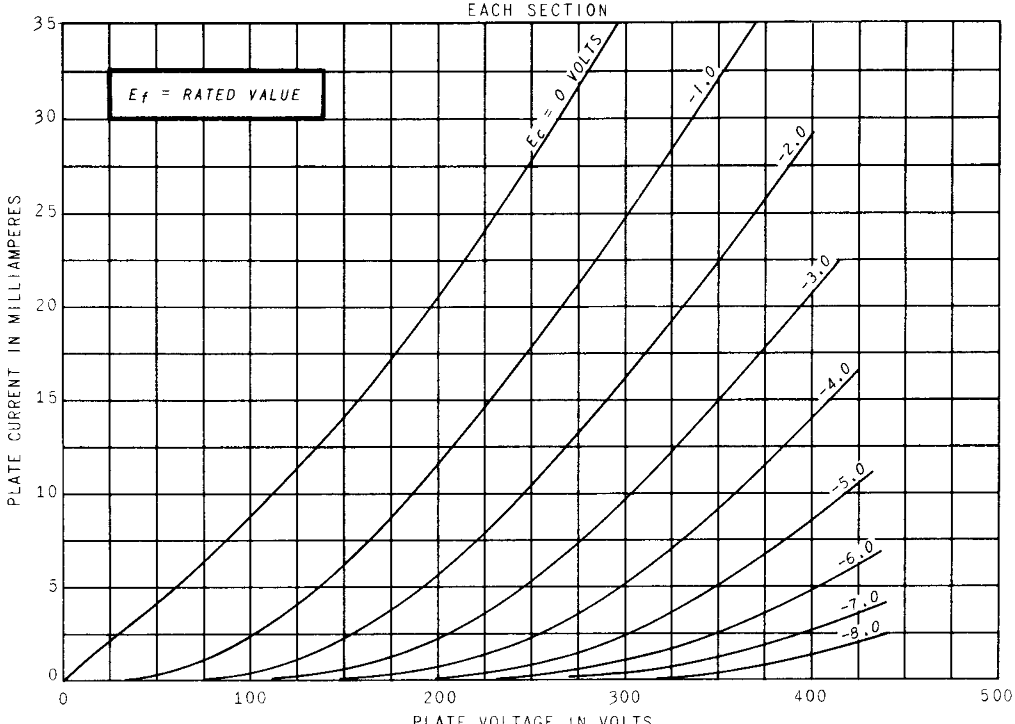
Δ Heater current of a bogey tube at Ef = 6.3 volts.

\# The time required for the voltage across the heater to reach 80 percent of the bogey value after applying 4 times the bogey heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times the bogey heater voltage divided by the bogey heater current.

** Without external shield.

AVERAGE PLATE CHARACTERISTICS

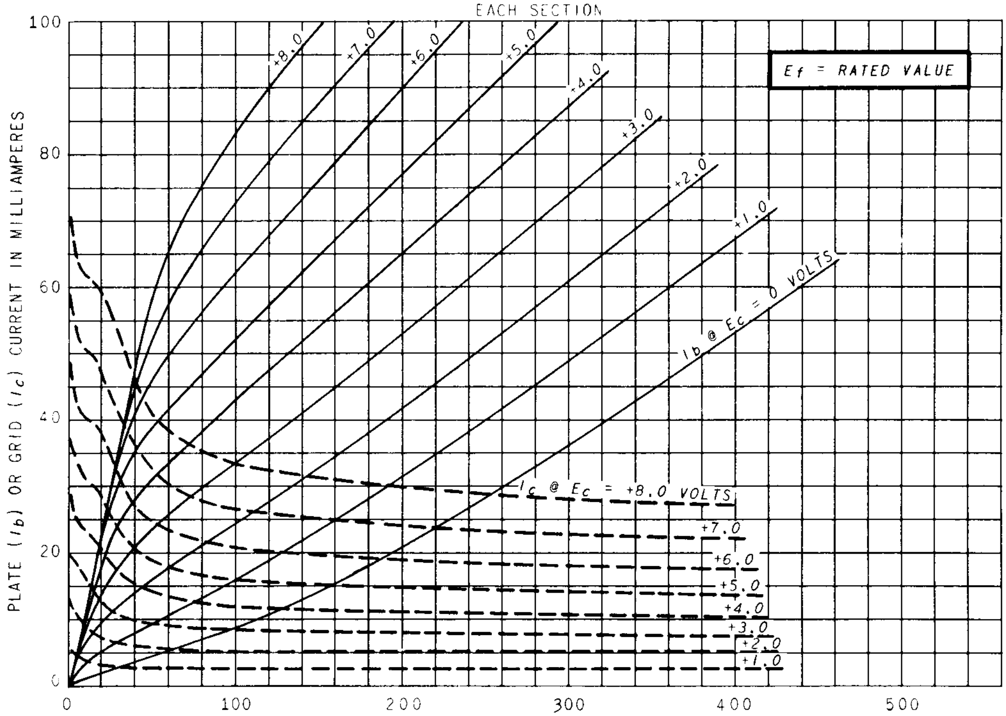
EACH SECTION



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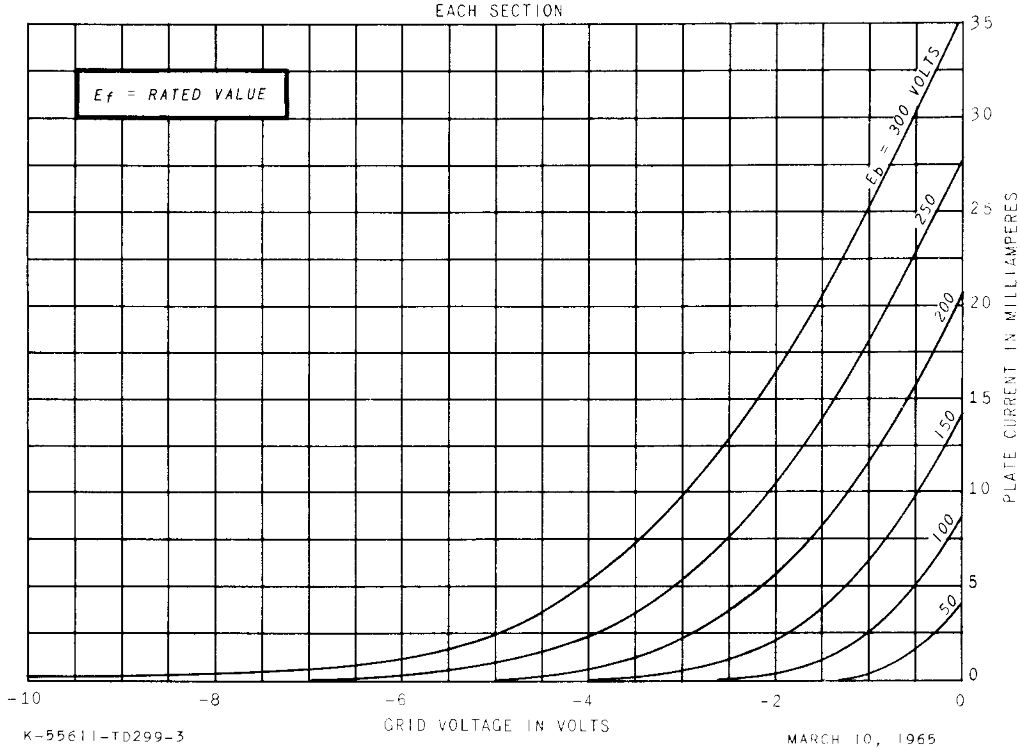
AVERAGE PLATE CHARACTERISTICS

EACH SECTION

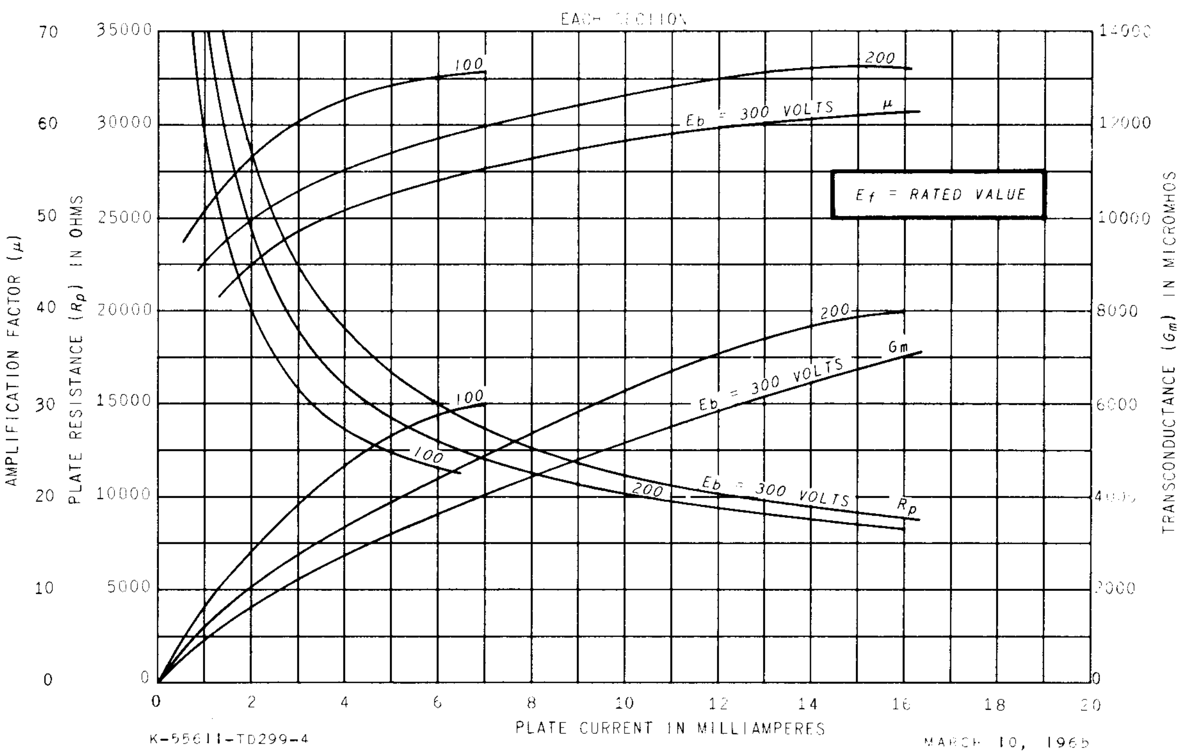


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AVERAGE TRANSFER CHARACTERISTICS



AVERAGE CHARACTERISTICS



TUBE DEPARTMENT

GENERAL ELECTRIC

Owensboro, Kentucky